

## INFORMATION DISCLOSURE CITATION

IN AN APPLICATION  
(Use several sheets if necessary)

JAN 28 2002

PATENT &amp; TRADEMARK OFFICE

Docket Number (Optional)  
HUV-050.01 (19787-5001)Application Number  
09/955,738Applicant  
Hafner et al.Filing Date  
September 18, 2001Group Art Unit  
1746

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
PL	AA US 6,325,909 B1	12/04/01	Li et al.	205	106	
PL	AB US 6,283,812 B1	09/04/01	Jin et al.	445	24	
PL	AC US 6,250,984 B1	06/26/01	Jin et al.	445	51	
PL	AD US 6,221,330 B1	04/24/01	Moy et al.	423	447.3	
PL	AE US 6,221,154 B1	04/24/01	Lee et al.	117	87	
PL	AF US 6,210,800 B1	04/03/01	Nesper et al.	428	367	
PL	AG US 6,203,814 B1	03/20/01	Fisher et al.	424	443	
PL	AH US 6,159,742	12/12/00	Lieber et al.	436	164	
PL	AI US 6,146,227	11/14/00	Mancevski	445	24	
PL	AJ US 6,129,901	10/10/00	Moskovits et al.	423	447.3	
PL	AK US 6,099,965	08/08/00	Tennent et al.	428	408	
PL	AL US 6,063,243	05/16/00	Zettl et al.	204	164	
PL	AM US 5,997,832	12/07/99	Lieber et al.	423	249	
PL	AN US 5,824,470	10/20/98	Baldeschwieler et al.	435	6	
PL	AO US 5,753,088	05/19/98	Olk	204	173	

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO
PL	AP WO 00/66485	11/09/00	PCT				X
PL	AQ WO 00/73205 A1	12/07/00	PCT				X
PL	AR WO 00/09443	02/24/00	PCT				X
PL	AS WO 96/38705	12/05/96	PCT				X

## OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages Etc.)

PL	AT	Wong et al., "Carbon Nanotube Tips: High-Resolution Probes For Imaging Biological Systems", J. Am. Chem. Soc., 120:603-604, (1998)

Form PTO-14-9

**INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION**  
*(Use several sheets if necessary)*

Docket Number (Optional)  
HUV-05001 (19787-5001)

Application Number  
09/955,738

Applicant  
Hafner et al.

Filing Date  
September 18, 2001

Group Art Unit  
1746

PL	BJ	Nikolaev et al.; "Gas-phase Catalytic Growth of Single-Walled Carbon Nanotubes from Carbon Monoxide", Chemical Physics Letters 313: 91-97, (November 5, 1999)
PL	BK	Sinnott et al.; "Model of Carbon Nanotube Growth Through Chemical Vapor Deposition", Chemical Physics Letters 315: 25-30, (December 17, 1999)
PL	BL	Single-Walled Nanotubes Produced by Metal-Catalyzed Disproportionation of Carbon Monoxide", Chemical Physics Letters 260: 471-475, (September 27, 1996)
PL	BM	Hafner et al.; "Catalytic Growth of Single-Walled Carbon Nanotubes from Metal Particles", Chemical Physics Letters, 296 : 195-202, (October 30, 1998)
PL	BN	Anderson et al.; "Influence of the Support on the Structural Characteristics of Carbon Nanofibers Produced From the Metal-Catalyzed Decomposition of Ethylene", Chem. Mater 12: 823-830, (2000)
PL	BO	Cheung et al.; "Growth and Fabrication with Single-Walled Carbon Nanotube Probe Microscopy Tips", Applied Physics Letters, 76(21): 3136-3138, (May 22, 2000)
PL	BP	Kyotani et al.; "Formation of Ultrafine Carbon Tubes by Using an Anodic Aluminum Oxide Film as a Template", Chemistry of Materials 7(8): 1427-1428, (August 1995)
PL	BQ	Li and Liu; "Preparation of Monodispersed Fe-Mo Nanoparticles as the Catalyst for CVD Synthesis of Carbon Nanotubes", Chem. Mater. 13: 1008-1014, (2001)
PL	BR	Han et al.; "Synthesis of Silicon Nitride Nanorods Using Carbon Nanotube as a Template", Applied Physics Letters 71(16): 2271-2273, (October 20, 1997)
PL	BS	Ago et al.; "Dispersion of Metal Nanoparticles for Aligned Carbon Nanotube Arrays", Applied Physics Letters, 77(1): 79-81, (July 3, 2000)
PL	BT	Li et al.; "Highly-Ordered Carbon Nanotube Arrays for Electronic Applications", Applied Physics Letters, 75(3): 367-369, (July 19, 1999)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

RECEIVED  
APR 1 2 2002  
TC 1700

RECEIVED  
MAR 1 1 2002  
TC 1700

Form PTO-1449

## INFORMATION DISCLOSURE CITATION

## IN AN APPLICATION

(Use several sheets if necessary)

Docket Number (Optional)

HUV-050.01 (19787-5001)

Application Number

09/955,738

Applicant

Hafner et al.

Filing Date

September 18, 2001

Group Art Unit

1746

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO
PL	BU	WO 98/05920	02/12/98	PCT			X
PL	BV	WO 00/09443	02/24/00	PCT			X

## OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages Etc.)

PL	BW	Cheung et al.; "Carbon Nanotube Atomic Force Microscopy Tips: Direct Growth by Chemical Vapor Deposition and Application to High Resolution Imaging" PNAS, 97(8): 3809-3813, (April 11, 2000)					
PL	BX	Cheung et al.; "Growth and Fabrication with Single-Walled Carbon Nanotube Probe Microscopy Tips", Applied Physics Letters, 76(21): 3136-3138, (May 22, 2000)					
PL	BY	Hafner et al.; "High-Yield Assembly of Individual Single-Walled Carbon Nanotube Tips for Scanning Probe Microscopies", The Journal of Physical Chemistry B, 105(4): 743-746, (February 1, 2001)					
PL	BZ	Hafner et al.; "Direct Growth of Single-Walled Carbon Nanotube Scanning Probe Microscopy Tips"					
PL	CA	Nakayama et al.; "Microprocess for Fabricating Carbon-Nanotube Probes of a Scanning Probe Microscope", J. Vac. Sci. Techn. B, 12(2):661-664, (Mar/April, 2000)					
PL	CB	Qin et al.; "Growing Carbon Nanotubes by Microwave Plasma-Enhanced Chemical Vapor Deposition", Applied Physics Letters 72(26): 3437-3439, (June 29, 1998)					
PL	CC	Stevens et al.; "Carbon Nanotubes as Probes for Atomic force Microscopy", Nanotechnology 11: 1-5, (2000)					
PL	CD	Database CA 'Online', Chemical Abstracts Service, Columbus OHIO, Database AccessionNo. 133: 181653 CA XP 002187925					
PL	CE	International Search Report Completed on January 22, 2002 and Mailed on February 06, 2002					

EXAMINER

DATE CONSIDERED

1/22/03

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

COPY OF PAPERS  
ORIGINALLY FILED

Form PTO-1449

**INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION**  
*(Use several sheets if necessary.)*

Docket Number (Optional)  
HUV-05001 (19787-5001)

Application Number  
09/955,738

Applicant  
Hafner et al.

Filing Date  
September 18, 2001

Group Art Unit  
1746

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
PL	AU	US 4,663,230	05/05/87	Tennent	428	367
PL	AV	US 5,165,909	11/24/92	Tennent et al.	423	447.3

**FOREIGN PATENT DOCUMENTS**

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES NO

**OTHER DOCUMENTS**
*(Including Author, Title, Date, Pertinent Pages, Etc.)*

PL	AW	Wong et al.; "Covalently Functionalized Nanotubes as Nonometer-sized Probes in Chemistry and Biology", Nature, 394 : 524-527, (July 02, 1998)
PL	AX	Wang et al.; "Single-walled 4A Carbon Nanotube Arrays", Nature, 408: 50-51, (November 2000)
PL	AY	Wong et al.; "Covalently-Functionalized Single-Walled Carbon Nanotube Probe Tips for Chemical Force Microscopy", J. Am. Chem. Soc. 120: 8557-8558, (1998)
PL	AZ	Wang et al.; "Atomic Structure and Electronic Properties of Single-Walled Carbon Nanotubes", Nature 391: 62-64, (January 1, 1998)
PL	BA	Woolley et al.; "Direct Haplotyping of Kilobase-Size DNA Using Carbon Nanotube Probes", Nature Biotechnology, 18: 760-763, (July 2000)
PL	BB	Zhang et al.; "Heterostructures of Single-Walled Carbon Nanotubes and Carbide Nanorods", Science 285: 1719-1722, (September 10, 1999)
PL	BC	Journet et al.; "Large-scale Production of Single-Walled Carbon Nanotube by the Electric-arc Technique", Nature, 388: 756-758, (August 21, 1997)
PL	BD	Dai et al.; "Nanotubes as Nanoprobes in Scanning Probe Microscopy", Nature 384: 147-150, (November 14, 1996)
PL	BE	Cheung et al.; "Carbon Nanotube Atomic Force Microscopy Tips: Direct Growth by Chemical Vapor Deposition and Application to High-Resolution Imaging", PNAS, 97(8): 3809-3813, (April 11, 2000)
PL	BF	Kelly et al.; "Threefold Electron Scattering on Graphite Observed With C <sub>60</sub> - Adsorbed STM Tips", Science, 273 : 1371-1373, (September 6, 1996)
PL	BG	Fan et al.; "Self-Oriented Regular Arrays of Carbon Nanotubes and their Field Emission Properties", Science, 283: 512-514, (January 22, 1999)
PL	BH	Thess et al.; "Crystalline Ropes of Metallic Carbon Nanotubes", Science 273: 483-487, (July 26, 1996)
PL	BI	Hafner et al.; "High-Yield Assembly of Individual Single-Walled Carbon Nanotube Tips for Scanning Probe Microscopies", The Journal of Physical Chemistry B, 105(4): 743-746, (February 1, 2001)